

(3) Mr. M'Lachlan's book is mainly a collection of exercises in geometry, arithmetic, algebra, and trigonometry. They are all good, natural questions, straight from the workshop and other human sources. For the engineering student (for whom they are designed) they are ideal, while other students also will find much of value. The text is inferior in value, as if the writing of it had been a perfunctory task; but there is not much text, and the exercises alone are well worth the half-crown at which the price is fixed.

(4) M. Fitzpatrick's book of exercises in algebra might have been written for the express purpose of enabling English mathematicians to thank God that they are not as other men. There are 1300 questions, drawn mainly from French examination papers. The book contains all the old artificial questions which England is in process of discarding, and among the whole thirteen hundred we have been unable to find one natural problem taken straight from human life. In one particular, however, it is for the English mathematician to drop the rôle of Pharisee and take up that of Publican. We have nothing but praise for the clearness and exactness of the language of M. Fitzpatrick's book, while in the first and third of the English books now under review we find carelessness of language that often produces ambiguities, and sometimes amounts to misstatement. In language we have much to learn from France.

D. B. M.

OUR BOOKSHELF.

The Child: Its Care, Diet, and Common Ills.

By Dr. E. Mather Sill. Pp. viii + 207. (New York: Henry Holt and Co.) Price 1 dollar net.

In the modern nursery the mother requires information on many questions which used to be disregarded or left entirely to the discretion of the doctor. She now realises that in her kingdom of the nursery, preventive medicine depends to a large extent upon her care and foresight. If she provides her children with the conditions they require for healthy development, they tend to remain well and happy, and the services of the physician will be required seldom.

Dr. Sill has had a large experience of children's medicine, and, in this small volume, he has contrived to present, in simple language, much valuable information on the clothing, feeding, general hygiene, and minor ailments of children. It is an unpretentious book, admirably adapted to its purpose as a handbook for young mothers. It is well printed, and is supplied with attractive illustrations and an index.

Some useful tables are included, and a few recipes for invalid dishes, together with clear directions for the preparation of simple domestic

remedies, such as the various kinds of medicated baths. The common slight ailments of childhood are described, and a list is given of the poisons most liable to invade the nursery, together with their domestic remedies.

In every treatise on infant care, the instructions for the modification of cow's milk for bottle-fed babies are apt to be involved and lengthy, and perhaps in the little volume under review the author has not been entirely successful in avoiding this fault.

The book closes with advice to parents to tell their children some elementary physiological facts about the phenomenon of reproduction and the care that they should take of their bodies. This wise advice is strengthened by suggestions as to the best way of explaining these matters to children.

Dr. Sill's book is one to recommend cordially, as it is certain to be appreciated by those for whom it is intended.

An Account of the Morisonian Herbarium in the possession of the University of Oxford. By Prof. S. H. Vines, F.R.S., and G. Claridge Druce. Pp. lxxviii + 350 + plates. (Oxford: Clarendon Press, 1914.) Price 15s. net.

ALL who take an interest in the history of botany, and especially the history of botany in Britain, will be glad to see the second work on the Oxford Collections, which has just been issued under the joint authorship of Prof. Vines and Mr. Druce. These names are a guarantee both of accuracy and of erudition, nor will the reader fail to discover on every page of the interesting and valuable introduction a breadth of acquaintance with the old literature, as well as with sources of information by no means readily accessible. The position of the Bobarts, father and son, in relation to the carrying out of Morison's great work, is made very clear, and, incidentally, the earlier history of the Oxford Botanic Garden is well told in the letters and remarks of those who were interested in its inception and early progress.

The bulk of the work is occupied by the "*Plantarum Historiæ universalis Oxoniensis, pars secunda et pars tertia.*" The second part of the "*Historia*" was issued by Morison, while the younger Bobart was entrusted with the completion of the third part. In the present work, in which the plants are enumerated, the modern reader will find the critical notes incorporated by the authors of great service in identifying the older names and descriptions. The book is a scholarly one, and well worthy of the reputation of its authors.

A Gypsy Bibliography. By Dr. G. F. Black. Pp. vii + 226. (London: Bernard Quaritch, 1914.) Price 15s. (Gypsy Lore Society, Monograph No. 1.)

For the first time, Dr. G. F. Black, of the New York Public Library, has undertaken the difficult task of compiling a comprehensive bibliography

of gypsy literature. A preliminary edition of this bibliography was issued for revision by European and American scholars in 1909, and the information thus obtained has been used in the present compilation, which includes 4577 entries, accompanied by a good subject index. No attempt has been made to sift the chaff from the wheat, and many books and articles now included have obviously no claim to be regarded as scientific authorities. In a new edition it would be well to define by special type those publications which are really of value. The leading writers on gypsy lore have been fully dealt with—Borrow with 103 entries, Wlislöcki, 182, and Bataillard, 41; while the work of English authorities like MacRitchie, Sampson, Thompson, and Winstedt, is adequately recorded.

The bibliography is prepared on scientific principles, and footnotes to the more important articles supply useful information. It is disappointing to note that the Oriental material has been less carefully examined than that of the West. For example, in the case of India, much second-rate material is recorded, while the records of recent ethnographical surveys, and locally published books and pamphlets have often been neglected. It may be hoped that in a new edition the libraries of the India Office, Royal Asiatic Society, the Imperial Library at Calcutta, and other local sources will be more carefully examined.

A Textbook of Domestic Science for High Schools. By Matilda G. Campbell. Pp. vii+219. (New York: The Macmillan Company, 1913.) Price 4s. net.

HAD this book been published a few years ago in this country it would probably have been described in its title as a book of "domestic economy." It is concerned chiefly with cookery, which is regarded frankly as an art, and taught as usual by recipes. The treatment is not scientific in the proper sense, and the few chemical formulæ and statements of fact about chemistry introduced will serve only to confuse the student. Under a different title, and with some omissions, we should have here a good book on practical cookery.

The Religious Revolution of To-day. By Prof. J. T. Shotwell. Pp. ix+162. (Boston and New York: Houghton Mifflin Co., 1913.) Price 1.10 dollars net.

PROF. SHOTWELL here publishes the William Brewster Clark Memorial lectures he delivered last year at Amherst College. These lectures are in memory of Dr. W. B. Clark, who graduated from Amherst in 1876, and their object, a foreword to the volume states, is to assist "in throwing light in a genuinely scientific spirit upon the relation of the research, discovery, and thought of the day to individual attitude and social policy." The titles of the lectures are: "Contrasts," "Devolution or Evolution?" "The Problem and the Data," and "The New Régime."

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LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

Active Nitrogen.

A FURTHER paper by Tiede and Domcke has appeared (*Berichte*, February 7, 1914) in which it is stated that bomb nitrogen passed over copper moderately heated (to about 400° C.) is incapable of giving the glow characteristic of active nitrogen. This is held to confirm the previous statement by the same authors relative to nitrogen prepared by heating a metallic azide. In each case the result is attributed to the successful elimination of any trace of oxygen.

We have carefully repeated this new experiment, taking every precaution. All parts of the apparatus were sealed together by fusion. Its lightness was thoroughly tested, both before and after the experiment, and occluded gases were carefully got rid of. The column of copper employed consisted of rolls of the finest gauze (ninety threads to the inch), carefully reduced from the oxidised condition. Its length was 50 cm., and its diameter 17 mm. The temperature was slowly taken up from 15° C. to 480° C., without any distinct change in the intensity of the glow at any stage. The experiment has been repeated on several occasions before colleagues. A subsequent examination of the copper showed that oxidation had not proceeded for more than 8 cm. We emphatically dissent therefore from Tiede and Domcke's conclusion, in this case, as in the previous one.

The rest of their paper is an attempt to show that some of the characteristic effects can be got with oxygen only, in the entire absence of nitrogen. We must content ourselves here with saying that we do not agree with their observations, but that these would not tell against the existence of active nitrogen, even if they were correct. The conclusive fact is the capacity of the gas to react with, e.g. hydrocarbons, to form hydrocyanic acid. This they have not attempted to dispute.

We are glad to see that Koenig and Elöd (*Berichte*, February 21, 1914) are in agreement with us that azide-nitrogen gives the glow perfectly well.

H. B. BAKER.

R. J. STRUTT.

Imperial College of Science, March 3.

Remarkable Upper-Air Records at Batavia.

Two sounding-balloons liberated at Batavia during the present rainy season have met with exceedingly low temperatures, when entering the stratosphere at the usual height of about 17,000 metres (10.6 miles).

On December 4, 1913, -90.9° C. (-131.6° F.) was registered, and on November 5 -91.9° C. (-133.4° F.). Though in this last case the clockwork had stopped, the register may be accepted without reservation. I believe this air temperature of -91.9° C. to be the lowest on record.

On December 4 the balloon (weight 2.2 kg.) reached a height of 26,040 metres (16.2 miles), and the registering, both in the ascent and in the descent, is to be depended upon, as will be proved below. What is most remarkable in the temperature record is that from 17,000 metres upward an increase from -91.9° C.